ABSTRACT

The present invention is an improvement in the design of a perforating gun to perforate the casing in oil and gas wells. Perforating guns have a cylindrical body member with explosive charges at specified intervals designed to shoot outwardly through the body member, the well casing, cement sheath, and into the rock formation. There are recessed areas, scallops, on the outer surface of the body member where the perforating jets, formed by the explosive charges, exit the body member. The present invention uses the strength of an arching geometric shape for the recessed area to be able to further reduce the thickness of steel for minimal resistance to the perforating jet. Minimizing the resistance to the perforating jet increases the depth of penetration into the rock formation and increases the hole size.